

This manual provides detailed information on what we are all required to do to reduce the contamination of surface water, groundwater, and stormwater to protect our quality of life.

The federal Clean Water Act mandates that cities and counties control the quality of stormwater runoff.

King County code makes it unlawful to directly or indirectly discharge contaminants into the storm drainage system, surface water or groundwater and requires the development of this manual to assist people in preventing contaminated discharges.

ABOUT THIS MANUAL

King County's water resources—its streams, lakes, wetlands, groundwater, and Puget Sound—play an important role in the quality of life we enjoy. They provide us recreation and drinking water, support tourism and salmon, and are used by industry. These waters, however, are vulnerable to pollution from a wide variety of human activities.

Many of our water pollution problems are due in large part to pollutants that are washed off from land by storms. The quality of “stormwater” from public facilities, commercial and industrial businesses, and agricultural lands is an increasing concern nationwide. Many people believe that stormwater is “clean” and does not harm water quality. This perception is understandable since the amount of pollution from any one spot is not usually significant by itself. But when all these small amounts are combined, they can cause big water quality problems.

The federal Clean Water Act mandates that cities and counties control the quality of stormwater runoff. One way to achieve this requirement is to implement pollution prevention measures on individual properties. To meet the requirements of the Clean Water Act and to sustain our quality of life, the King County Council passed [King County Code 9.12](#) in November 1992.

This manual applies to those commercial, industrial, governmental, and agricultural activities in **unincorporated King County** that have the potential to contribute pollutants to stormwater runoff or directly to receiving waters (single-family residential activities are covered in separate educational materials). Stormwater runoff from these areas may seep into the ground, drain to a storm sewer or a drainage ditch, or flow over the ground. Regardless of the way runoff leaves the site, it ends up in a stream, lake, wetland, groundwater, or Puget Sound.

Many people believe that stormwater is “clean” and does not harm water quality, but contaminated stormwater can negatively affect every water body it enters.

Contaminated stormwater can negatively affect every water body it enters. Therefore, this manual provides detailed information on what we are all required to do to reduce the contamination of surface water, groundwater, and stormwater from our properties. It shows that we are all doing our part to protect our quality of life.

Chapter 1 describes what is expected of you as a business/agency owner or manager and provides a beginning point on the use of this manual.

Chapter 2 provides information on how water becomes polluted and the effects of pollutants on water quality.

Chapter 3 describes stormwater best management practices that are required for various business and nonresidential activities.¹

Chapter 4 provides detailed information on how to implement many stormwater best management practices.

Chapter 5 provides information on regulations from other agencies that may apply to your activities.

Chapter 6 provides information on other programs or services that can provide assistance in implementing the stormwater best management practices.

¹This manual works in a modular format so that businesses only receive the information that is pertinent to their site. Therefore the activity sheets to be located in Chapter Three may need to be obtained by request. The options for obtaining these sheets is described on page 5 in this chapter.

BEST MANAGEMENT PRACTICES... WHAT ARE THEY?

The methods of improving stormwater quality, and thus surface water and groundwater, are called best management practices (BMPs).

The goal of King County's program is to reduce the contamination of water resources through emphasis on source-control BMPs because these are very effective and relatively inexpensive.

This manual applies to all businesses and other non-residential entities in unincorporated King County.

The methods of improving stormwater quality, and thus surface water and groundwater, are called *best management practices (BMPs)*. BMPs encompass a variety of managerial, operational, and structural measures that will reduce the amount of contaminants in stormwater and improve the quality of our water resources.

BMPs are separated into two broad categories: **source control** and **treatment**. As the name implies, **source-control BMPs** prevent contaminants from entering water bodies or stormwater runoff. Some source-control BMPs are operational, such as checking regularly for leaks and drips, and educating employees about site clean-up procedures. Other *source-control BMPs* require use of a structure to prevent rainwater from contacting materials that will contaminate stormwater runoff. Examples of these BMPs include a covered area or berm to prevent clean stormwater from entering work areas.

In contrast, **treatment BMPs** are structures that treat the stormwater to remove the contaminants. Most treatment BMPs require elaborate planning, design and construction. No treatment BMP is capable of removing 100 percent of the contaminants in stormwater.

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MANUAL COVERAGE

This manual applies to *all* businesses and other non-residential entities in **unincorporated** King County. It is intended to cover every activity considered to have the potential to contaminate surface, storm, or groundwater. Anyone involved in a particular activity, whether as an employee, supervisor, manager, or landlord must take part in implementing the appropriate BMPs selected from this manual.

Note: New development activities and significant redevelopment of a site are subject to other stormwater management requirements set forth in the [King County Surface Water Design Manual](#).

EXEMPTIONS

If you are already implementing BMPs according to another federal, state, or local program you do not have to implement the BMPs in this manual. In addition, people who are voluntarily implementing BMPs may also be exempt. **You are exempt if you:**

- Have obtained and are complying with a general or individual permit under the National Pollutant Discharge Elimination System (NPDES) Stormwater Permit Program. See regulatory requirement [R.11 in Chapter 5](#) of this manual for details of this program.
- Are implementing and maintaining a farm management plan approved by the King Conservation District.
- Are implementing BMPs in compliance with King County [Code 21A.30](#), which addresses animal and livestock keeping practices.
- Are a public facility implementing BMPs in compliance with the stormwater management program of the County's NPDES municipal stormwater permit.
- Are engaged in forest practices, with the exception of Class IV general forest practices.
- Are voluntarily implementing other BMPs, which are equivalent measures, methods, or practices to the BMPs in this manual (contact the SWM Division to determine equivalency).

Please understand that these exemptions are only from the requirements of this manual. If you are exempted for one or more of the reasons listed above, the County assumes that you are implementing the appropriate BMPs. If the County finds that you have not implemented BMPs, or that the BMPs that you have implemented are not effectively addressing the discharge of contaminants, then you may be required to

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comply with this manual. Everyone must implement BMPs, but how each individual goes about it, and through what program, may differ from one situation to the next. The following is a step-by-step approach to comply with the BMP requirements.

STEP-BY-STEP APPROACH

Step 1 - Determine Your Status

Determine if you are obligated to comply with the BMPs by checking the list of exemptions in this chapter. If you are not exempt, then you must comply with the BMPs in this manual.

Step 2 - Complete the Enclosed Activity Work Sheet

This work sheet (located at the back of this chapter) will aid you in identifying the activities you conduct at your property which may result in the contamination of stormwater. Take your time to complete the work sheet. The title of each activity is general and it may not be obvious at first glance that an activity you do fits under one of the titles.

Step 3 - Obtain BMP Activity Sheets

After completing the work sheet you need to obtain the information regarding which BMPs to implement. The activities you checked on the work sheet will refer you to the appropriate BMPs for those activities. This information can be found on the one-page activity sheets in this manual. If you do not have these activity sheets, there are three options for obtaining them:

1. Visit your local King County Public Library to find a copy of the *King County Stormwater Pollution Control Manual*. Photocopy the appropriate pages.
2. Mail a photocopy of your completed work sheet, with your name and address to: *King County Surface Water Management Division, Drainage Investigation and Regulation Unit, Water Quality Engineer, 700 Fifth Avenue, Suite 2200, Seattle, Washington 98104*. We will mail you the appropriate activity sheets.
3. Call the King County Surface Water Management Division at 296-1900. We will mail you the activity sheets you request.

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Step 4 - Review Activity Sheets

Once you have obtained the activity sheets, review them carefully. You will need to implement the required BMPs listed on the activity sheets for each of the activities you marked on the work sheet. If you are already implementing effective pollution control practices for a particular activity, you should determine if there are additional measures to incorporate based on the activity sheets. If the activity sheets give you some flexibility in selection of BMPs, make sure you think through how to best implement BMPs for protecting runoff from pollution.

Step 5 - Evaluate Existing Conditions

Once you have determined the activities of concern and have reviewed the activity sheets, evaluate whether you have any practices or measures already in place that protect water quality from pollutants generated by the activities.

In addition, you will need to gain familiarity with the stormwater drainage patterns and system on your site. To control stormwater pollution it is important to understand your drainage system. Use the site plan graph paper (in the back of this chapter) to sketch out the location of your site's drainage system. This will help you locate storage and activity areas in order to reduce flooding on your site and minimize the chance of spills or discharges to the system.

Step 6 - Seek Assistance

At this point or at any time during this process you can request a free on-site consultation from the Surface Water Management Division. Water quality engineers are available to walk through your site discussing existing site conditions and necessary BMPs and providing assistance with implementation. To request an [on-site consultation](#) contact: 296-1900.

Step 7 - Check Your Internal Floor Drains and Plumbing System Connections

A common situation that can cause severe stormwater pollution problems is discharge of non-stormwater to the storm drainage system. Examples are discharges from

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You must correct illicit discharges. If you have any question as to whether your discharge is allowable, contact the King County Surface Water Management Division, Water Quality Engineers at 296-1900.

The activity sheets identify specific required BMPs, usually followed with the phrase “or equivalent method, measure, or practice.” There may be acceptable BMPs that are not listed in the manual.

Your BMP implementation strategy should be a well-thought-out approach to controlling runoff pollution from your site; you do not have to develop or submit any written plan.

internal floor drains, appliances, industrial processes, sinks, and toilets that are connected to the nearby storm drainage system. These discharges should be going to the sanitary sewer system, a holding tank, an on-site process water treatment system, or a septic system. You must correct these *illicit* discharges. If you have any question as to whether your discharge is allowable, contact the King County Surface Water Management Division, Water Quality Engineers at 296-1900.

For information on how to check for illicit connections see BMP Info [Sheet 1 in Chapter 4](#). You can also ask for help from your local sewer utility. If you find out that your internal drains are improperly connected to the storm drainage system, they will need to be either removed, permanently plugged, or connected to the sanitary sewer, septic system, on-site treatment system, or a holding tank.

Step 8 - Develop an Implementation Strategy

Look at your property as a whole and determine how the BMPs you implement will work together to improve overall runoff quality from your property. The activity sheets identify specific required BMPs, usually followed with the phrase “or equivalent method, measure, or practice.” There may be acceptable BMPs that are not listed in the manual. Be creative in assessing your own needs and the constraints that you may face on your property. You are welcome to implement the stated BMP or an alternative BMP you believe better suits your particular situation. If you are interested in pursuing an alternative BMP, fill out and mail an [Alternative BMP Request Form](#) to the King County Surface Water Management Division. A copy of this form is provided at the end of this chapter.

Your BMP implementation strategy should be a well-thought-out approach to controlling runoff pollution from your site; you **do not** have to develop or submit any written plan.

Step 9 - Implement the Non-structural Source-Control BMPs

First, implement the non-structural operational BMPs that typically do not require extensive construction. Examples include educating employees on spill control and cleanup, use of drip pans or drop cloths, and sweeping instead of hosing a work area.

Step 10 - Implement, if Necessary, the Structural Source-Control BMPs

Second, implement the structural source-control BMPs that may require a building permit or are larger capital expenditures. Examples include constructing a building to enclose a work activity that is currently in the open, or berming a storage area to divert runoff.

Step 11 - Implement, if Necessary, a Treatment BMP

If a treatment BMP is determined to be necessary for your site, you must have an acceptable design prepared before it is constructed or installed. The [King County Surface Water Design Manual](#) must be followed in designing and receiving approval of treatment BMPs and a permit may need to be obtained from the County. Once your BMP design has been approved by the County and a permit issued (if necessary), construction may begin.

Step 12 - Keep Records

Keep copies of your completed work sheet, the activity sheets, and other documentation on implementing BMPs. You may use records to illustrate your compliance with this manual, and as references for information on BMPs and who to call for assistance. You can also use the manual as a training tool for new employees.

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Step 13 - Maintain your BMPs

Make sure employees are carrying out operational-type BMPs. Employee education should be a continuous process for effective BMP implementation. Check waste containers for deterioration and inspect and clean your catch basins regularly. The best way to make BMP maintenance routine is to schedule BMP checks and designate responsible individuals to be your BMP inspectors. As new employees join your company or agency, make sure to involve them in your pollution control efforts.

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Step 14 - Evaluate Your BMPs

After a year or two, take some time to evaluate your BMPs and your decisions. Be aware of new technology. Is everything working as expected? Has your property use changed? Do you now know of something that can be done better?

Step 15 - Questions?

If you have questions or need assistance, please call the Surface Water Management Division at 296-1900.

MEASURING COMPLIANCE

Compliance with the manual means implementing the required Best Management Practices (or approved alternatives) and preventing the discharge of contaminants into the storm drainage system, surface waters, and groundwater. There are no requirements for monitoring your discharges or for submitting a BMP plan. Please keep in mind that the intent of the County code and the BMPs is to reduce the discharge of contaminants in the most efficient and least costly way.

In the manual, the county has identified general sets of required BMPs to reduce such discharges. The BMPs are general in order to comprehensively cover all activities and give flexibility for the variety of properties in the county. There are properties, however, where implementing the minimum BMPs may not adequately reduce the discharge of pollutants. Therefore it is important to spend time evaluating your property and your activities before simply implementing the minimum requirements. You are encouraged to use the SWM Division's free on-site consultation service for assistance in evaluating your site and implementing the BMPs.

You may find that an alternative BMP would work better on your site. To implement an alternative you must complete a short application (included in the back of this chapter) and submit it to the King County Surface Water Management Division for approval.

If you are implementing the minimum BMPs and there are still significant contaminated discharges from your site, a County engineer will ask you to address those discharges even though you are doing the minimum BMPs. Similarly, if at one time you implemented BMPs but have not maintained them and they are not working, a County engineer will request additional action. This action will be decided in consultation with you and could include additional source-control BMPs, installation of treatment BMPs, or other actions to control the pollutants.

The intent of the County code and the BMPs is to reduce the discharge of contaminants in the most efficient and least costly way.

It is important to spend time evaluating your property and your activities before simply implementing the minimum requirements.

In determining the need for additional BMPs and the time frame for action, the County engineer will consider whether you have made substantial progress and a good faith effort in reducing contaminated discharges and improving the quality of your stormwater. The County's intent is to work with you to implement the BMPs most appropriate for your situation, to prevent contamination of our water resources.

If you have questions or need assistance in determining appropriate BMPs for your property, call the Surface Water Management Division at 296-1900.

IMPLEMENTATION SCHEDULE

The following is a recommended implementation schedule. As a general guideline, businesses that are aware of the requirements in this manual should implement the best management practices according to the following schedule. The County will not take enforcement actions for non-compliance with the schedule below. By law, the County's first response is to provide technical assistance to businesses in implementing BMPs. Once contact is made between the Surface Water Management Division and a business, an individualized implementation schedule will be established.

◆ **Date BMP Manual Becomes Effective**

September 2, 1995

◆ **6 months from Effective Date of Manual**

Implement the Non-structural Source-Control BMPs

These include stocking spill-control and cleanup materials and training employees to use drip pans and drop cloths; sweeping instead of hosing; switching to less toxic alternatives or not using toxic chemicals; training employees to inspect storage areas for leaks; and providing small containment areas for used oil, chemicals, etc.

◆ **12 months from Effective Date of Manual**

Implement the Structural Source-Control BMPs

These include changes to your property that require a

building permit such as a small building. BMPs which require a building permit may take longer to implement than the above schedule allows. People will not be held liable for noncompliance for delays associated with obtaining a building permit. The Surface Water Management Division also recognizes that some businesses will have more requirements to meet than others. The SWM Division will be looking for evidence that a business is actively pursuing compliance, meaning a good faith effort to implement the BMPs. This may mean implementing the nonstructural BMPs according to the schedule, showing progress in providing required information, and actively planning for completion of more costly ones. A schedule of expected implementation will inform the SWM Division of your effort toward gaining compliance.